

<b>Interview Summary</b>	<b>Application No.</b> 10/050,724	<b>Applicant(s)</b> HOULT ET AL.	
	<b>Examiner</b> Marianne L. Padgett	<b>Art Unit</b> 1762	

All participants (applicant, applicant's representative, PTO personnel):

(1) Marianne L. Padgett. (3)\_\_\_\_\_.

(2) Jason Lohr. (4)\_\_\_\_\_.

Date of Interview: 07 January 2005.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 9,15,19 and 22.


Identification of prior art discussed: art of record.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Agreed to enter the after final of 12/6/04, then amend claims as discussed in the advisory of 12/23/04 with proposed wording to be submitted to the examiner by FAX (attached), which would be used in an Examiner's Amendment.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

  
MARIANNE PADGETT  
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

*Applicant's proposal**— Do NOT separate**goes with interview***STALLMAN & POLLOCK LLP**

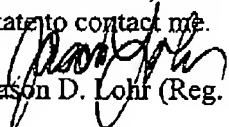
Intellectual Property Attorneys

353 Sacramento Street, Suite 2200  
San Francisco, CA 94111Telephone: (415) 772-4900  
Facsimile: (415) 398-2890**TO:** Examiner Marianne L. Padgett  
Group Art Unit 1762  
U.S. Patent & Trademark Office  
Washington, D.C.**FAX:** 571-273-1425**PHONE:****FROM:** JASON D. LOHRTelephone: (415) 772-4900  
Facsimile: (415) 398-2890

Email: jlohr@stallmanpollock.com

**DATE:** January 7, 2005**PAGES:** 7 (including cover)If you did not receive all of the pages in this fax, please  
contact Georgia K. Stith at (415) 772-4900, Ext. 106.**OUR FILE NUMBER:** COHD-4540**RETURN TO:** G. Stith**MESSAGE:**

Examiner Padgett:

Pursuant to our telephone conversation today and your request, attached herewith a Proposal in  
Response to Advisory Action Mailed December 23, 2004. If you have any questions, or require  
further information, please do not hesitate to contact me.  
Jason D. Lohr (Reg. No. 48,163)The documents accompanying this facsimile transmission contain information from the law firm of  
STALLMAN & POLLOCK LLP which is confidential or privileged. The information is intended to be for the  
use of the individual or entity named on this transmission sheet. If you are not the intended recipient, be aware  
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PATENT

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Anthony P. Hoult

Application No.: 10/050,724

Filed: January 14, 2002

For: DIODE-LASER CURING OF LIQUID  
EPOXIDE ENCAPSULANTS

Confirmation No.: 7718

Group Art Unit: 1762

Examiner: Marianne L. Padgett

**PROPOSAL IN RESPONSE TO  
ADVISORY ACTION MAILED  
DECEMBER 23, 2004**353 Sacramento St., Suite 2200  
San Francisco, CA 94111  
(415) 772-4900*not  
formed  
amendment*

Dear Examiner Padgett:

In response to the Advisory Action mailed December 23, 2004, and per our discussion of today, January 7, 2005, please review the following proposal to amend the above-identified application as follows:

**Amendments to the Specification** begin on page 2 of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 3 of this paper.

**Remarks/Arguments** begin on page 6 of this paper.

Atty Docket No.: COHD-4540

*Proposal, not formal amendment*

PATENT

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**Amendments to the Specification:**

Please replace the paragraph beginning at page 8, line 22, with the following rewritten paragraph:

— Referring now to FIGS 3 and 4, another embodiment 60 of apparatus for carrying out the method of the present invention is illustrated. Apparatus 60 includes a diode-laser bar including an array of diode-lasers 64. Diode-laser bar 62 is mounted on a heat sink 66. Light 68 from diode-lasers 64 is formed into a line or strip of light 70 by a cylindrical lens 72 and a spherical lens 74. Line of light 70 is formed in a focal plane (not shown) of spherical lens 74. Physical stops 78 are provided for controlling light-intensity distribution along the length of line 70. A detailed description of such a line-of-light projecting apparatus is provided in co-pending application No. 09/522,120, now issued U.S. Patent No. 6,494,371, the complete disclosure of which is hereby incorporated by reference.—

Atty Docket No.: COHD-4540

Proposal, not formal amendment PATENT  
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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-8. (Canceled)

9. (Currently Amended) A method of encapsulating an electronic component supported on a substrate, comprising the steps of:

- (a) depositing a thermally curable epoxide layer on the electronic component, the epoxide layer including therein at least one light absorbing material; and
- (b) directing laser radiation having a wavelength between about 600 and 1000 nm onto the thermally curable epoxide layer for a time period sufficient that the light absorbing material absorbs a portion of the laser radiation and generates heat in the layer, whereby the epoxide layer is cured without external heating and without non-thermal curing.

10. (Original) The method of claim 9, wherein said light absorbing material is carbon black.

11. (Original) The method of claim 9, wherein said light absorbing material is a dye.

12. (Original) The method of claim 9, wherein said light absorbing material is a powdered metal.

13. (Previously Presented) The method of claim 9, wherein said laser radiation has a wavelength of about 808 nm.

14. (Previously Presented) The method of claim 9, wherein said laser radiation is produced by a diode-laser array.

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15. (Currently Amended) A method of encapsulating an electronic component supported on a substrate, comprising the steps of:

- (a) providing a diode-laser array for delivering radiation laser radiation having a wavelength between about 600 and 1000 nm;
  - (b) depositing on the electronic component a thermally curable epoxide layer covering the component, the epoxide layer including therein at least one light absorbing material;
  - (c) transporting said laser radiation from said diode-laser array, via an optical fiber bundle, to an optical projector for projecting said laser radiation; and
  - (d) projecting said laser radiation onto said thermally curable epoxide layer for a time period sufficient that the light absorbing material absorbs a portion of the laser radiation and generates heat whereby the epoxide layer is cured without external heating and without non-thermal curing.
- 

16. (Previously Presented) The method of claim 15, wherein said laser radiation has a wavelength of about 808 nm.

17. (Original) The method of claim 15, wherein said at least one light absorbing material is carbon black.

18. (Previously Presented) The method of claim 15, wherein during step (d) said integrated circuit component is held in a fixed relationship to said optical projector and said laser radiation is projected onto said epoxide layer in the form of a spot having a size sufficient to at least cover the electronic component.

19. (Currently Amended) A method of encapsulating an electronic component supported on a substrate, comprising the steps of:

- (a) depositing on the electronic component an amount of thermally curable epoxy compound sufficient to form a thermally curable epoxide layer thereof covering the component, the epoxide layer having included therein at least one light absorbing material;

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(b) directing laser radiation having a wavelength between about 600 and 1000 nm into an optical projector arranged to project said laser radiation in the form of a line of said laser radiation;

(c) projecting said line of laser radiation onto said thermally curable epoxide layer; and

(d) during step (c), moving the substrate and said integrated circuit with respect to said optical projector such that said thermally curable epoxide layer on the integrated circuit is exposed to said radiation for a time sufficient that said light absorbing material absorbs a portion of the laser radiation and generates heat in the layer whereby the thermally curable epoxide layer is cured without external heating and without non-thermal curing.

20. (Previously Presented) The method of claim 19, wherein said laser radiation is produced by a diode-laser array.

21. (Original) The method of claim 19, wherein said at least one light absorbing material is carbon black.

22. (Currently Amended) A method of encapsulating an electronic component supported on a substrate, comprising the steps of:

(a) depositing on the electronic component a thermally curable liquid epoxide layer including therein at least one light absorbing material; and

(b) irradiating the epoxide layer with laser light generated by a laser diode array and having a wavelength between 600 and ~~100nm~~ 1000nm, the epoxide layer being formulated so that at least 15% of the radiation striking the epoxide layer is absorbed by the at least one light absorbing material in a manner to heat and cure the epoxide layer without external heating and without non-thermal curing.



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**REMARKS/ARGUMENTS**

Claims 9-22 were pending in the present application. This proposed response amends claims 9, 15, 19, and 22, leaving pending in the application claims 9-22. Consideration of the proposal and reconsideration of the rejected claims is respectfully requested.

**I. Amendment to the Claims**

Claim 22 has been amended to correct an inadvertent typographical error as supported by the specification.

Claims 9, 15, 19, and 22 have been amended in accordance with the Examiner's helpful and appreciated suggestion to recite that the epoxide layer is cured without external heating and without non-thermal curing. As stated by the Examiner on page 2 of the Advisory Action of December 23, 2004, such an amendment "would remove all possible options presented by the process of the applied art rejection." As such, Applicants respectfully submit that the claims should be in condition for allowance.

**II. Conclusion**

In view of the above, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the pending claims and a notice of allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-1703, under Order No. COHD-4540. A duplicate copy of the transmittal cover sheet attached to this Response to Advisory Action Mailed December 23, 2004, is provided herewith.

Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: 1/7/05

By: 

Jason D. Lohr  
Reg. No. 48,163

Attorneys for Applicant(s)

Atty Docket No.: COHD-4540